

REMARKS

Upon entry of the present paper, the Claims under consideration remain 1-22. Claim 1 has been amended hereby to make clear that full activation of the polymer includes a flowing and wetting of the first polymer component in order to more particularly point out the claimed invention and to place the claims in better condition for appeal if necessary. The amendment is fully supported by the specification, as discussed below, and no new matter has been added. Applicants respectfully request reconsideration of all outstanding rejections and withdrawal of the finality of the Office Action dated 08 June 2004. The Detailed Action of 08 June 2004 will now be addressed with reference to the headings and any paragraph numbers therein.

Claim Rejections -35 USC §112

Per paragraph 3 of the Detailed Action, Claims 1-22 stand rejected as indefinite because the Detailed Action considers the claim terminology “fully activated” unclear. The Detailed Action goes on to state that if “fully activated” defines over “a melted first polymer of multi-component filaments taught by WO ‘658, then the Examiner is not able to properly determine the scope of the term “fully activated.”

As noted above, Claim 1 has been amended to more clearly point out and distinctly claim that the mechanism of the present invention includes a flowing of the melted polymer. Further, it is believed that the term “fully activated” has been, and is, adequately defined for a person having ordinary skill in the art. Applicants refer to the specification at

page 30, line 16, where the complained-of term is fully and fairly defined to any person of skill in the art. To wit:

If necessary or desired, the web 154 is then transported to a through air bonding (TAB) unit 170 to partially or fully activate the web 154, by bringing the polymer component A of the multicomponent filaments to a liquid state where it can flow onto, or wet, the second material in the web. By the phrase “partially activated,” it is meant that less than a majority of the A polymer component is melted. By the phrase “fully activated,” it is meant that the majority of the A polymer component is melted. Care should be taken to minimize flow of the melted sheath polymer beyond that needed to wet the absorbents, [emphasis added] especially in the case of the meltblown bicomponent fibers, which are much finer than bicomponent spunbond fibers and therefore more susceptible to a liquification scenario where the polymer component A may separate from the core polymer component if held too long in the fully activated state. Desirably, the web is subjected to between about 160°F and about 300°F for a period of time between about 0.5 to about 20 seconds to achieve full activation of polymer component A of the multicomponent meltblown filaments. More preferably, the time period is between about 1 to about 10 seconds and most preferably about 4-7 seconds. However, the type of polymer and the oven temperature will govern the actual time needed to melt the A polymer component.

“Through-air bonding” on the other hand, as defined in WO ‘658¹ (page 6)

merely recites:

As used herein, “through-air bonding” or “TAB” means a process of bonding a nonwoven, for example, a bicomponent fiber web in which air which is sufficiently hot to melt one of the polymers of which the fibers of the web are made is forced through the web. The air velocity is between 100 and 500 feet per minute and the dwell time may be as long as 6 seconds. The melting and resolidification of the polymer provides the bonding. Through-air bonding has restricted variability and is generally regarded as a second step bonding process. Since TAB requires the melting of at least one component to accomplish bonding, it is restricted to webs with two components such as bicomponent fiber webs or webs containing an adhesive fiber or powder.

¹ WO 00/29658, of record, cited by the Detailed Action as equivalent technology.

Thus, “fully activated” is a web level phenomenon dependant upon temperature and exposure time appropriate for the web and its components as a whole, and is not merely a fiber level phenomenon as implied by the Detailed Action. “Fully activated” is clearly defined by the present invention as more than just a ‘melting’ of one polymer to a degree where some bonding might occur.²

Hence, what the present claims are limited to by the complained-of term is a defined degree of melt for the web. It is respectfully submitted that any person having ordinary skill in the art of bicomponent fiber/absorbent web making would understand the intent and scope of the present claims as a whole after reaching a thorough understanding of the invention. It is therefore respectfully requested that the present rejections based on §112 be withdrawn.

Claim Rejections -35 USC §103

Per paragraph 4 of the Detailed Action, Claims 1-12 and 14-22 stand as obvious over PCT Application WO 00/29658 (hereinafter WO ‘658) in view of Jackson *et al.* (U.S. Patent 5,350,370, hereinafter Jackson). Claim 1 recites that the web is fully activated. Claim 1 further recites that the densification of the web takes place while the web is fully activated.

As the basis for this rejection, it is clear that the Detailed Action has equated the claim term “fully activated” with the more general term “melted” (see Detailed Action page 4, line 12). This basis of the present rejections represents a fundamental

² This is what is meant by Applicants’ previous remarks: “not just exposed to a melting point temperature.”

misinterpretation of the Claim language. Applicants herewith incorporate their discussion above concerning the clear distinctions between the claim terminology and a mere melting of some undefined degree or amount on a fiber within a web.

As admitted by the Detailed Action at its paragraph 5, WO '658 does not expressly disclose a degree of web activation sufficient to cause polymer flow and wetting of the absorbent particles (see page 4, line 4 of Detailed Action). However, the Detailed Action then deems that such physical phenomenon will naturally occur according to the reference. This deemed occurrence is unsupported by any reference to a teaching within the art.

If the Examiner is invoking personal knowledge that the stated physical phenomenon will occur, Applicants herewith request an Affidavit from the Examiner according to 37 CFR 1.104(d)(2) and withdrawal of the finality of the last Office Action in order that they be given a full and fair chance to respond to the personal knowledge of the Examiner.

If the Examiner is not invoking personal knowledge, then the assertion is unsupported that a web subjected to through-air bonding according to WO '658 would meet the limitations of the present claims. Thus a *prima facie* case has not been made, and it is respectfully requested that all rejections be withdrawn.

As further admitted by the Detailed Action at its paragraph 5, WO '658 does not teach a densification of the fibrous web while the web is fully activated (see page 4, line 7 of Detailed Action). However, the Detailed Action contends that because Jackson teaches the densification of a web which has at least been softened [emphasis in the Detailed Action], and because it is a common "practice in the art to melt (i.e. fully activate) binder component" in a

web (see page 4, line 16) “during a heat-compaction operation,” the present Claims are somehow obvious.

However, “melt” is not equivalent to the present invention’s “fully activate” (*supra*) and therefore the contention of the Detailed Action is incorrect.

Without implication as to the meaning or breadth of claims in the cited references, Applicants still do not believe that either reference discloses the limitations of the present invention, particularly when the claims are viewed as a whole. Therefore, WO ‘658 and Jackson cannot and do not render the present invention obvious, either singly or in combination. It is therefore respectfully requested that the present rejections be withdrawn.

The remaining Claims 2-12 and 14-22 rejected under paragraph 4 of the Office Action are ultimately dependent upon Claim 1. Applicants incorporate their discussion with respect to the inapplicability of WO ‘658 and Jackson to Claim 1 as a whole.³ As Claims 2-12 and 14-22 incorporate all limitations of Claim 1, they are also believed to define over the cited art. It is therefore respectfully requested each of the present rejections be withdrawn.

Per paragraph 6 of the Detailed Action, Claim 13 stands as obvious over WO ‘658 and Jackson and further in view of Haynes *et al.* (U.S. Patent 6,019,152, hereinafter Haynes). Applicants incorporate their discussion with respect to the inapplicability of WO ‘658 and Jackson to Claim 1. Without implication as to the meaning or breadth of claims in the Haynes reference, after careful study of Haynes, it is believed that Haynes teaches an

³ While the rejections focus on the mistaken equivalence of “melt” and “fully activated,” the claim as a whole must be examined, including the combination of fully activated first polymer concurrent with a densification of the web.

improvement in the apparatus of hot air knives which may be suitable for through-air bonding. The text of Haynes at col. 2, lines 19-52⁴ basically recounts the same definition of through-air bonding as WO '658 and is not believed to add further evidence for a conclusion of obviousness for the present invention. It is not believed that Haynes teaches or suggests that a first polymer is fully activated in conjunction with the densification of a collected mass of filaments and commingled absorbent material which takes place while the first polymer is fully activated. It is therefore respectfully requested that the present rejection be withdrawn.

Conclusion

As further seen in the Detailed Action's Response to Arguments at paragraph 7, a flawed basis of the present rejections is the mistaken equating, e.g., at page 7, line 11 of the Detailed Action, of the generalized "melting" teachings of the prior art's through-air bonding with the specifically defined and claimed "fully activated" web of the present invention. It is believed that when properly understood, it is apparent that the present invention offers a method for producing webs of a new, useful, and nonobvious type than has heretofore been taught by the art.

For all the foregoing reasons, the Claims as presently amended are believed to be allowable over the art of record. A notice to that effect is earnestly solicited.

⁴ Cited by the Detailed Action at paragraph 6.

Request For Telephonic Interview

Clearly, there are differences between the present invention and the cited reference(s) involving patentable subject matter. These differences are believed by the Applicants to be properly defined in the present Claims. The Examiner is requested to call Applicants' attorney (per the provisions of M.P.E.P. § 713) to discuss any further problems or suggest solutions in defining the present invention in order to expedite the case towards allowance before issuing a further Office Action.

Favorable consideration is requested.

Respectfully submitted,



Roland W. Norris
Registration No. 32,799

Pauley Petersen & Erickson
2800 West Higgins Road; Suite 365
Hoffman Estates, Illinois 60195
TEL (847) 490-1400
FAX (847) 490-1403